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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,033	03/16/2005	Nicolas Berthou	4590-381	2704

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LOWE HAUPTMAN GILMAN & BERNER, LLP
1700 DIAGNOSTIC ROAD, SUITE 300
ALEXANDRIA, VA 22314

EXAMINER

YACOB, SISAY

ART UNIT	PAPER NUMBER
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2612

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/528,033

Applicant(s)

BERTHOU ET AL.

Examiner

Sisay Yacob

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1 The application of Berthou et al., "Sealed keyboard" filed on March 16, 2005
been examined.

Claims 1- 11 are pending

Claim Rejections - 35 USC § 102

2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that
form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3 Claims 1-5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by US
Patent of Ootani et al., (5,821,482).

4 As to claim 1, Ootani et al., discloses a keyboard comprising (Col. 1, lines 6-10) a
switch (Item 71 of figures 5A-B and 6A-B), a rigid key (Item 42 of figures 4A-B, 5A-B
and 6A-B), allowing an operator to operate the switch (Col. 4, lines 51-64); a front face
having an opening traversed by the rigid key (Item 5 of figures 4A-B, 5A-B and 6A-B),
and sealing means preventing particles from penetrating between the rigid key and the
opening (Item 6 of figures 4A-B, 5A-B and 6A-B), wherein the sealing means comprise

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a flexible membrane traversed by the rigid key, attached to the key and to the front face (Col. 3, line 45- Col. 4, line 6).

5 As to claim 2, the keyboard as claimed in claim 1, wherein the flexible membrane is attached to the rigid key and to the front face by bonding (Col. 3, lines 44-65; Col. 6, lines 1-13).

6 As to claims 3 and 7, the keyboard as claimed in claims 1 and 2, wherein it comprises means of limiting the travel of the rigid key relative to the front face (Item 51 of figures 4A-B, 5A-B and 6A-B).

7 As to claim 4, the keyboard as claimed in claim 3, wherein the limitation means comprise a shoulder of the rigid key, and in that the shoulder is capable of butting against the front face when the operator presses on the rigid key (Items 44 and 61 of figures 4A-B, 5A-B and 6A-B).

8 As to claim 5, the keyboard as claimed in claim 4, wherein the flexible membrane is attached to the rigid key on the shoulder (See figures 4A-B, 5A-B and 6A-B).

Rejections - 35 USC § 103

9 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10 The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11 Claims 6 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent of Ootani et al., (5,821,482) in view of US Patent of Dugas et al., (5,612,692).

12 As to claims 6, and 8-11, the keyboard as claimed in claims 1 and 2-5, however, Ootani et al., does not expressly disclose wherein it comprises means of lighting the rigid key via the inside of the keyboard, and in that the rigid key is transparent. In a same field of endeavor, Dugas et al., discloses a sealed keyboard that comprises

means of lighting the key via the inside of the keyboard, and in that the key is transparent (Col. 2, lines 23-40; Col. 4, lines 55-61; Col. 6, lines 15-31; Items 16, 44 and 48 of figure 4).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the keyboard of Ootani et al., by incorporating the means of lighting the key via the inside of the keyboard, as disclosed by Dugas et al., in order to have a keyboard wherein it comprises means of lighting the rigid key via the inside of the keyboard, and in that the rigid key is transparent, because Dugas et al., discloses a sealed keyboard that may be removed and cleaned that is shielded from any foreign elements and provide a tactile feedback of key actuation to the user by key illumination.

Conclusion

13 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following cited art is further to show the state of art related to sealed keyboard.

14 In the US Patent (4,527,030) Oelsch discloses a keyboard comprising a flexible printed circuit and an insulating sheet. Holes in the insulating sheet allow contact to be made with contact surfaces on the printed circuit upon pressing buttons or keys associated with the contact surfaces. Each key assembly comprises an elastically deformable snap-action element which is adapted to be deformed upon actuation by

means of an actuating button so as to bring said contact element into contact with said contact surface.

15 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sisay Yacob whose telephone number is (571) 272-8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A. Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sisay Yacob

12/27/2006

S-Y-



JEFFERY A. HOFSSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600